AUTODOME Junior HD PTZ Camera

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Invented for life

HD ONVIF

- HD 1080p30 and 720p60 ips resolutions for crisp, clear images
- 160x zoom (10x optical, 16x digital)
- Quad video streaming generates simultaneous H.264, M-JPEG, and JPEG video streams
- Durable, rugged design with indoor and outdoor models available
- ONVIF conformant

AutoDome Junior HD is a rugged, extremely compact, and easy to install PTZ camera system with superb HDTV quality video. The camera features day/night functionality for high definition quality images in low light conditions. This discreet, high-speed dome camera has been specifically designed to deliver uncompromised functionality and performance for indoor and outdoor applications.
The AutoDome Junior HD provides direct network connection using H.264 and JPEG compression and bandwidth throttling to efficiently manage bandwidth and storage requirements while delivering outstanding image quality. The AutoDome Junior HD provides complete network-based control of all dome functionality including pan/tilt/zoom operation, presets, tours and alarms as well as web-based configuration of all dome settings.
The AutoDome Junior HD conforms to the ONVIF (Open Network Video Interface Forum) specification guaranteeing interoperability between network video products regardless of manufacturer.

AutoDome Junior HD highlights
With a dome diameter of only 6.02 inches (15.3 cm), the AutoDome Junior HD is nearly 50% smaller than the Bosch AutoDome. These compact dimensions make the AutoDome Junior HD ideal for discreet surveillance applications, including recessed mount options for indoor and outdoor cameras.
Despite its compact design, the AutoDome Junior HD delivers state-of-the-art technology and features that are rare to most compact PTZ cameras. Its variable pan and tilt speeds and AutoPivot ensure optimal camera control and viewing at all zoom levels. The high-performance 160x (10x optical/16x digital) zoom autofocus camera incorporates the latest digital imaging technology with excellent sensitivity and resolution. With 99 user-defined presets as well as tour and AutoPan modes, the AutoDome Junior HD is not small on features.
A single AutoDome Junior HD provides as much coverage as four fixed mini domes and is priced lower than a traditional PTZ dome camera. The AutoDome Junior HD maximizes your security investment by integrating with Bosch video management systems — BVMS, BVC, and BRS — as well as the full range of Bosch Video over IP products.
And, the AutoDome Junior HD is simple to install and use; available with surface, wall, recessed, and pipe mount options.

System overview

High-performance 160x PTZ day/night camera
The AutoDome Junior HD PTZ camera has a 1/2.5-inch progressive scan CMOS sensor. With up to 1080p resolution and sensitivity to below 1.0 lux, the AutoDome Junior HD Series offers exceptional performance at a very affordable price.
The AutoDome Junior HD supports up to 99 user-defined presets, as well as 1 preposition tour and 1 AutoPan mode. The preposition tour automatically moves the camera through a series of up to 99 sequential presets with a configurable dwell time between each preset.
Pan and tilt preset repeatability are accurate to within ±0.1 degrees to ensure that the correct scene is captured every time. AutoDome Junior HD delivers variable pan/tilt speeds from a crawl speed of only 1 degree per second up to an ultra-quick 120 degrees per second. The dome is capable of pan speeds of 360 degrees per second and tilt speeds of 100 degrees per second between presets. AutoDome Junior HD provides a tilt range of 0 to 94 degrees, and a pan range of up to 360 degrees continuous rotation.
The AutoScaling (proportional zoom) and AutoPivot (automatically rotates and flips the camera) features ensure optimal control.

Ultra-efficient H.264 encoding
AutoDome Junior HD uses an advanced H.264 encoder to create high-quality streaming video at ultra-low bit rates. Use of H.264 encoding, bandwidth throttling, and multicasting capabilities, minimizes bandwidth and storage usage to significantly reduce costs.
AutoDome Junior HD supports 1080p30, 720p60, 720p30, 480p30 (WVGA), and 240p30 (WQVGA) resolutions for 50 Hz and 60 Hz models at 16:9 aspect ratio.

Multiple video streams
Bosch's innovative Quad-streaming feature enables the AutoDome Junior HD to deliver three H.264 streams together with an M-JPEG stream in full and reduced bandwidth modes. During full bandwidth operation (full HD 1080p30 or high frame rate 720p60) the second stream is an exact copy of the first stream. In reduced bandwidth mode (720p30), the second stream is an independently configurable, downscaled-resolution stream. In both modes the third H.264 stream consists of HD I-frames only. These streams facilitate bandwidth-efficient viewing and recording options as well as integration with third-party video management systems.

Open Platform Integration
The AutoDome Junior HD complies with ONVIF Profile S for easy integration into any ONVIF Profile S compliant third-party video management system. In addition, many third-party open platform video management systems support the AutoDome Junior HD.

Intelligence
With built-in video content analysis, the AutoDome Junior HD reinforces the Intelligence-at-the-Edge concept where edge devices become increasingly intelligent.
The AutoDome Junior HD also features Bosch's Intelligent Video Analysis (IVA). IVA is state-of-the-art intelligent video analysis that reliably detects, tracks, and analyzes moving objects while suppressing unwanted alarms from spurious sources in the image.

Image Stabilization
Image stabilization algorithms included with the AutoDome Junior HD reduces camera shake in both the vertical and horizontal axis, resulting in exceptional image clarity. Bosch's unique image stabilization solution does not reduce camera sensitivity, unlike competitive systems.

Rugged reliability
A heavy-duty, tamper-resistant aluminum housing protects the camera from vandalism and theft, ensuring the AutoDome Junior HD continues to deliver critical images even in the toughest environments.
As with all Bosch products, the AutoDome Junior HD has been subjected to the industry's most comprehensive and demanding battery of endurance tests such as HALT (highly accelerated life testing) to make sure it will hold up through years of use. And of course, it comes with Bosch's industry-leading 3-year warranty.

Functions

The following are some of the features that make the AutoDome Junior HD Series the perfect fit for a variety of indoor surveillance applications.

iSCSI device support
Built-in iSCSI support allows AutoDome Junior HD to stream video directly to an iSCSI RAID array. This enables efficient video storage just like a conventional DVR without streaming high bandwidth video across the network, making system recording performance totally independent from network performance.

Network-based control and configuration
The AutoDome Junior HD enables full camera control and configuration capabilities over the network. Operators or technicians can control camera pan/tilt/zoom operation, presets, tours, and alarm management functions virtually anywhere without need for additional wiring.
The embedded web server lets the installer access all the user settings, make camera adjustments, and update firmware via a standard web browser or via the Bosch Video Management System.

Device management
Simple Network Management Protocol (SNMP) support facilitates the remote monitoring and management. AutoDome Junior HD provides full support for SNMP v3.

Superior privacy masking
The AutoDome Junior HD allows for a total of 24 individual, easy to configure privacy masks, with up to 8 displayed in the same scene. As the camera is zoomed each mask changes size smoothly and quickly ensuring that the covered object cannot be seen. You also have a choice of black, gray, or white masking characteristics.

Ease of installation and servicing
The AutoDome Junior HD has been designed for quick and easy installation; a key feature of Bosch CCTV products. The dome comes fully assembled and ready for surface mount applications. Also available are wall, recessed, and pipe mounting kits which allow the AutoDome Junior HD to be easily adapted for individual site requirements. Indoor models are available in white or charcoal; the outdoor model is available in white.

Dual Power Supply
Power for the camera may be supplied via a Power over Ethernet Plus (PoE+, IEEE 802.3at, class 4) compliant network cable connection or via a 24 VAC power supply. The PoE+ option requires only a single cable connection to power and control the camera while also viewing images from the camera. (Outdoor camera models require a 24 VAC power supply to the heater.)

Viewing
View the video on a PC using a Web browser or via the Bosch Video Client, the Bosch Recording Station, the Bosch Video Management System, or in a third-party ONVIF-compliant system.

Video security App
The Bosch Video Security iPad App has been developed to fully utilize our Dynamic Transcoding features and enable **Anywhere** access to HD surveillance images, even over low-bandwidth connections. The App, together with the Bosch transcoder, is configured to give you complete control of all your cameras, from panning and tilting to zoom and focus functions. It's like taking your control room with you.

Certifications and approvals

HD standards
- Complies with the SMPTE 274M-2008 Standard in:
  - Resolution: 1920x1080
  - Scan: Progressive
  - Color representation: complies with ITU-R BT.709
  - Aspect ratio: 16:9
  - Frame rate: 25 and 30 frames/s
- Complies with the 296M-2001 Standard in:
  - Resolution: 1280x720
  - Scan: Progressive
  - Color representation: complies with ITU-R BT.709
  - Aspect ratio: 16:9
  - Frame rate: 25, 30, 50 and 60 frames/s

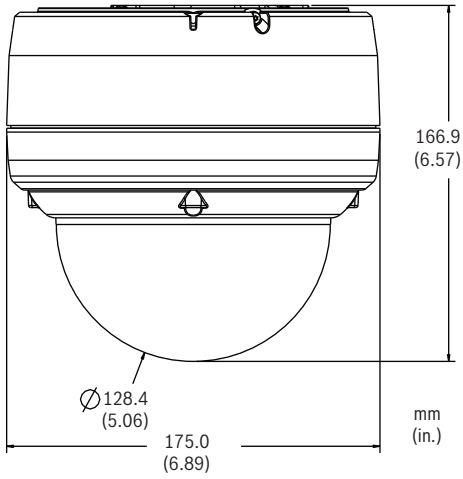
Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards Outdoor Models: Passes UL 2043 test
Environmental	Indoor Models: IP54 (excluding VJR-A3-IC mounting option) Outdoor Models: IP65

Notice

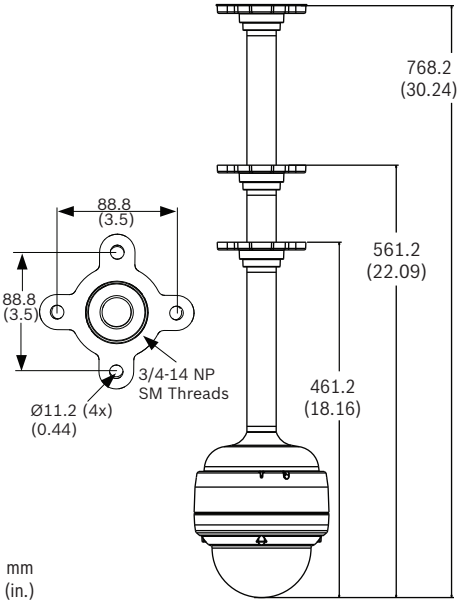
Conformity to EN 50130-4

One of the following power supply units is required to conform to the EN 50130-4 standard: VG4-A-PSU0, VG4-A-PSU1, or VG4-A-PSU2.

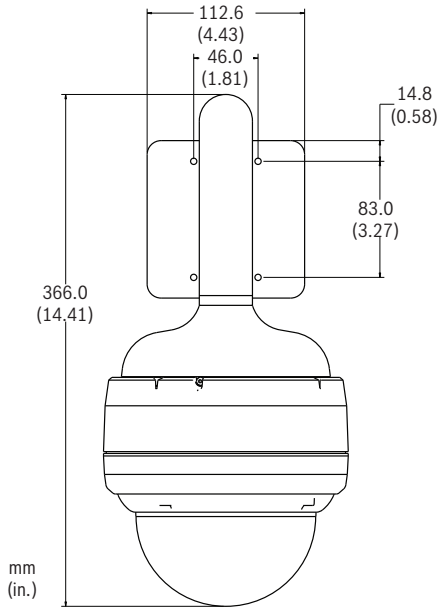
Installation/configuration notes

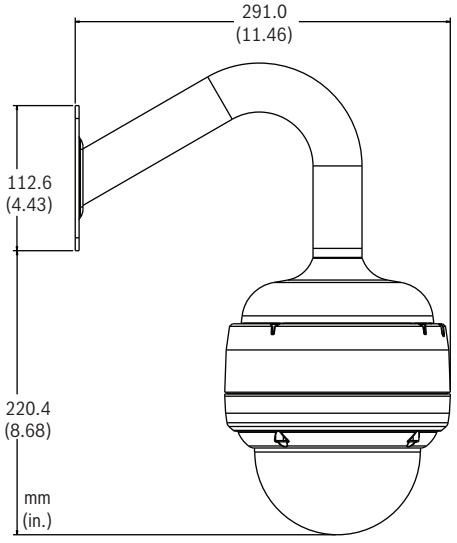


AutoDome Junior HD Dimensions

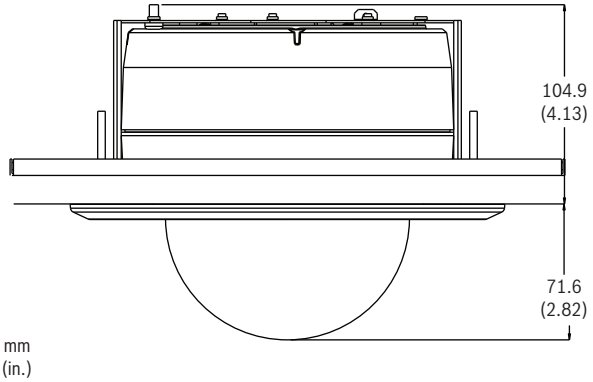


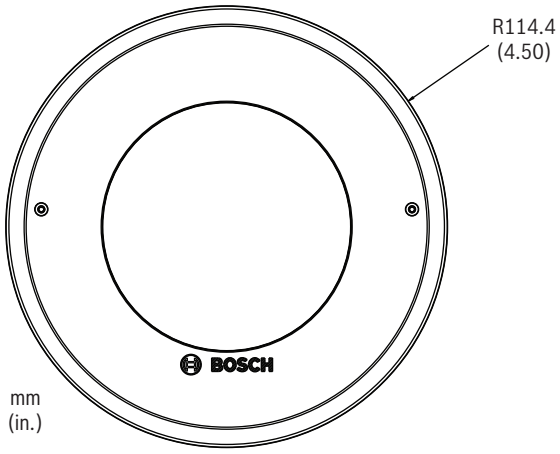
Pipe Mount Dimensions



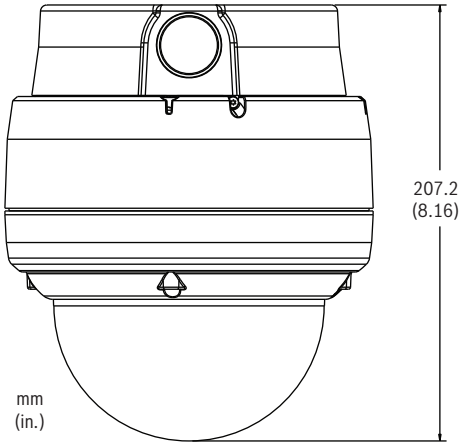


Wall Mount Dimensions





In-Ceiling / Recessed Mount Dimensions



Surface Mount Dimensions

Parts included

Indoor Models	
1	PTZ Dome Camera
1	Indoor Bubble, clear or tinted
1	Accessory Kit
	• 1 two-wire camera power cable
	• 1 four-wire alarm in/out cable
1	Mounting Plate
1	User Manual
Outdoor Models	
1	PTZ Dome Camera
1	Outdoor Bubble, clear
1	Accessory Kit
	• 1 two-wire camera power cable
	• 1 two-wire heater power cable

	• 1 four-wire alarm in/out cable
1	Mounting Plate
1	Outdoor Installation Kit
1	User Manual

Installation Notes:

1. A tinted outdoor bubble is available as an optional purchase.
2. An indoor AutoDome Junior HD camera cannot be converted to an outdoor model by attaching an outdoor bubble.

Technical specifications

10x HD Day/Night Camera

Imager	1/2.5 inch progressive scan CMOS	
Number of Pixels	2.1 Megapixels	
Aspect Ratio	16:9	
Lens	10x optical zoom (6.3 to 63 mm) (F1.8/F2.5 to close)	
Focus	Automatic with manual override	
Iris	Automatic with manual override	
Field of View	Horizontal: 5.5° to 50.6° Vertical: 3.1° to 29.3°	
Automatic Gain Control	Normal, Medium, High, Fixed	
Synchronization	Internal	
Aperture Correction	On/Off	
Digital Zoom	16x	
Sensitivity(typical)[1]	**30 IRE**[2]	**50 IRE**[2]
Day Mode		
SensUP Off	1.2 lx	2.0 lx
SensUP On (64x)	0.038 lx	0.063 lx
Night Mode		
SensUP Off	0.06 lx	0.1 lx
SensUP On (64x)	0.0018 lx	0.0031 lx
Electronic Shutter Speed (AES)	1x to 64x; 1/50 (1/60) to 1/10000	
Signal to Noise Ratio	> 50 dB (AGC off)	
Wide Dynamic Range	50 dB	
Backlight Compensation	On/Off	
White Balance	ATW, Indoor, Outdoor, AWB Hold, Extended ATW, Manual (adjustable R and B signals in Manual mode)	
Day/Night	Monochrome, Color, Auto	

1. F1.8, 1/30 (1/25) shutter, maximum AGC.

2. Tinted bubble adds 0.8 f-stop loss.

Software Control

Camera Setup/ Control	Via Internet Explorer Web browser version 9.0 or later, Bosch Configuration Manager, or BVMS
Software Update	Firmware upload

Network

Standards	H.264 (ISO/IEC 14496-10), M-JPEG, JPEG
Streaming	Individually configurable streams in H.264 and M-JPEG, configurable frame rate and bandwidth;
• 1080p30	One (1) H.264 1080p30 stream plus one (1) M-JPEG and one (1) I-frame stream
• 720p60	One (1) H.264 720p60 stream plus one (1) M-JPEG and one (1) I-frame stream
• 720p30	Two (2) independently configurable H.264 streams: One (1) H.264 720p30 stream, One (1) H.264 BP+ or H.264 MP SD stream, plus one (1) M-JPEG and one (1) I-frame stream
GOP Structure	IP, IBP, IBBP
Data Rate	9.6 kbps to 6 Mbps
Overall IP Delay	240 ms
Audio	G.711 (8 bits @ 8KHz) L16 (16 bits @ 16 kHz PCM)

Resolutions (H x V) and Frame Rates

Stream 1	
• Full HD/1080p	1920 x 1080, 30 ips
• HD/720p	1280 x 720, 60 ips
• HD/720p	1280 x 720, 30 ips
Stream 2[3]	
• SD/480p (WVGA)[4]	854 x 480, 30 ips
• SD/240p (WQVGA)[4]	432 x 240, 30 ips

3. Stream 1 must be set to 720p at 30 ips.

4. Images displayed in 16:9 aspect ratio.

Network

Protocols	RTP, Telnet, UDP, TCP, IP, http, HTTPS, FTP, DHCP, IGMP V2/V3, ICMP, ARP, SMTP, SNTP, SNMP, RTSP, 802.1x, iSCSI, DynDNS, UpnP
Ethernet	10-Base T/100 Base-TX, auto-sensing, half/full duplex, RJ45

PoE+	IEEE 802.3at, class 4
Storage	Built-in iSCSI support
Connectivity	ONVIF Profile S
Video Motion Analysis	Intelligent Video Analysis (IVA)

Mechanical/Electrical

Pan Range	0–360° continuous
Tilt Angle	0–93.6°
Variable Speed	Pan: 1°/s to 120°/s Tilt: 1°/s to 100°/s
Pre-position Speed	Pan:360°/s Tilt: 100°/s
Preset Accuracy	± 0.1° typical
Rated Voltage	
• Camera, All Models	24 VAC ± 10%, 50/60 Hz or Power over Ethernet+ (IEEE 802.3at Class 4)
• Heater, Outdoor Models	24 VAC ± 10%, 50/60 Hz
Power Draw: (typ.)	
• Indoor Models	17 W typical
• Outdoor Models	Camera only: 17 W typical Heater only: 25 W typical Total: 42 W typical

Environmental

Operating Temperature	
• Indoor Models	–10°C to 40°C (14°F to 104°F)
• Outdoor Models	–30°C to 50°C (–22°F to 122°F)
Storage Temperature	–40°C to 60°C (–40°F to 140°F)
Operating Humidity	0% to 90% relative, non-condensing
Environmental Rating	
• Indoor Models	IP54 (excluding VJR-A3-IC mounting option)
• Outdoor Models	IP65

Miscellaneous

Sectors/Titling	Eight (8) independent sectors with 20-character titles/sector
Privacy Masking	24 individually configurable privacy masks, maximum of eight (8) masks displayed in one scene
Presets	99, each with 20-character titles
Guard Tours	Two (2) types of tours: • Recorded tours: two (2), separately defined user-recorded tour paths • Preposition tour: one (1), consisting of up to 99 presets, consecutively
Supported Languages	English, German, Dutch, French, Italian, Spanish, Portuguese, Polish, Russian, Chinese, and Japanese

User Connections

Power	
• Camera, All Models	RJ-45 100 Base-TX Ethernet Power over Ethernet IEEE 802.3at Class 4, or 24 VAC, 50/60 Hz
• Heater, Outdoor Models	24 VAC, 50/60 Hz
Video and Control	RJ-45 100 Base-TX Ethernet
Alarm Input (2)	NC/NO
Alarm Output	Open collector NPN 32 VDC @ 150 mA max
Audio Input Line Level (one way audio)	
• Input Voltage	5.5 Vp-p max
• Impedance	9 Kohm typical

Construction

Size (Diameter x Height)	153.0 x 133.0 mm (6.02 x 4.61 in.)
Bubble Size	128.0 mm (5.04 in.)
Weight	1.92 kg (4.24 lb)
Material	
• Housing	Cast aluminum
• Bubble	Acrylic
Color	
• Indoor Models	White or Charcoal
• Outdoor Models	White

Ordering information

VJR-821-ICCV Indoor 10x AutoDome Junior HD with IVA, Charcoal, Clear Bubble, 60 Hz
Indoor AutoDome Junior HD with IVA, charcoal, 10x day/night, 60 Hz camera with clear bubble
Order number **VJR-821-ICCV**

VJR-811-ICCV Indoor 10x AutoDome Junior HD with IVA, Charcoal, Clear Bubble, 50 Hz
Indoor AutoDome Junior HD with IVA, charcoal, 10x day/night, 50 Hz camera with clear bubble
Order number **VJR-811-ICCV**

VJR-821-IWCV Indoor 10x AutoDome Junior HD with IVA, White, Clear Bubble, 60 Hz
Indoor AutoDome Junior HD with IVA, white, 10x day/night, 60 Hz camera with clear bubble
Order number **VJR-821-IWCV**

VJR-811-IWCV Indoor 10x AutoDome Junior HD with IVA, White, Clear Bubble, 50 Hz
Indoor AutoDome Junior HD with IVA, white, 10x day/night, 50 Hz camera with clear bubble
Order number **VJR-811-IWCV**

VJR-821-ICTV Indoor 10x AutoDome Junior HD with IVA, Charcoal, Tinted Bubble, 60 Hz
Indoor AutoDome Junior HD with IVA, charcoal, 10x day/night, 60 Hz camera with tinted bubble
Order number **VJR-821-ICTV**

VJR-811-ICTV Indoor 10x AutoDome Junior HD with IVA, Charcoal, Tinted Bubble, 50 Hz
Indoor AutoDome Junior HD with IVA, charcoal, 10x day/night, 50 Hz camera with tinted bubble
Order number **VJR-811-ICTV**

VJR-821-IWTV Indoor 10x AutoDome Junior HD with IVA, White, Tinted Bubble, 60 Hz
Indoor AutoDome Junior HD with IVA, white, 10x day/night, 60 Hz camera with tinted bubble
Order number **VJR-821-IWTV**

VJR-811-IWTV Indoor 10x AutoDome Junior HD with IVA, White, Tinted Bubble, 50 Hz
Indoor AutoDome Junior HD with IVA, white, 10x day/night, 50 Hz camera with tinted bubble
Order number **VJR-811-IWTV**

VJR-831-EWCV Outdoor 10x AutoDome Junior HD with IVA, White, Clear Bubble, 50/60 Hz
Outdoor AutoDome Junior HD with IVA, white, 10x day/night, 50/60 Hz camera with clear bubble
Order number **VJR-831-EWCV**

Accessories

UPA-2450-60 Power Supply, 120 V, 60 Hz
Indoor, 120 VAC, 60 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-60**

UPA-2450-50 Power Supply, 220 V, 50 Hz
Indoor, 220 VAC, 50 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-50**

VJR-A3-IC AutoDome Junior HD Indoor Recessed Mount
Recessed mount for indoor camera applications that do not require IP54 or a plenum rating
Order number **VJR-A3-IC**

VJR-A3-IC54 AutoDome Junior HD Plenum-rated and Outdoor Recessed Mount
Recessed mount required for indoor camera applications that must attain an IP54 or a plenum rating, and required for all recessed outdoor camera applications
Order number **VJR-A3-IC54**

VJR-A3-SP In-ceiling Support Kit for AutoDome 700/800 Series and AutoDome Junior HD
Suspended ceiling support kit for AutoDome 700 and 800 Series and AutoDome Junior HD In-ceiling mounts
Order number **VJR-A3-SP**

VEZ-A2-JC Surface Mount Adapter
Charcoal adapter for AutoDome Junior surface installations
Order number **VEZ-A2-JC**

VEZ-A2-JW Surface Mount Adapter
White adapter for AutoDome Junior surface installations
Order number **VEZ-A2-JW**

VEZ-A2-PC AutoDome Junior Pipe Mount
Charcoal
Order number **VEZ-A2-PC**

VEZ-A2-PW AutoDome Junior Pipe Mount
White
Order number **VEZ-A2-PW**

VEZ-A2-WC AutoDome Junior Wall Mount
Charcoal
Order number **VEZ-A2-WC**

VEZ-A2-WW AutoDome Junior Wall Mount
White
Order number **VEZ-A2-WW**

VJR-SBUB2-CL AutoDome Junior HD Clear Bubble, Indoor
Order number **VJR-SBUB2-CL**

VJR-SBUB2-TI AutoDome Junior HD Tinted Bubble, Indoor
Order number **VJR-SBUB2-TI**

VJR-SBUB3-CL AutoDome Junior HD Clear Bubble, Outdoor
Order number **VJR-SBUB3-CL**

VJR-SBUB3-TI AutoDome Junior HD Tinted Bubble, Outdoor
Order number **VJR-SBUB3-TI**

VG4-A-PSU0 24 VAC Power Supply Unit
24 VAC, 100 W, white, for an AutoDome Series camera
Order number **VG4-A-PSU0**

VG4-A-PSU1 120 VAC Power Supply Unit
120 VAC, 100 W, white, for an AutoDome Series camera
Order number **VG4-A-PSU1**

VG4-A-PSU2 230 VAC Power Supply Unit
230 VAC, 100 W, white, for an AutoDome Series camera
Order number **VG4-A-PSU2**

Software Options

MVS-FENC-AES BVIP AES 128 Bit Encryption
BVIP AES 128-bit encryption site license. This license is required only once per installation. It enables encrypted communication between BVIP devices and management stations.
Order number **MVS-FENC-AES**

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